

Chapter 29.18 - Sensitive Areas Overlay Zones ¹

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29.18.010 Purpose

The purpose of this Chapter is to provide for safe, orderly and beneficial development of property within areas characterized by diversity of physiographic conditions and shown on the Brigham City Zoning Map as Sensitive Areas Overlay Zone; to limit alteration of topography and reduce encroachment upon, or alteration of, such areas. Physiographic conditions can be considered to include, but are not limited to, slope of the land, natural drainage ways, wetlands, soil characteristics, potential landslide areas, faults zones and wildfire hazard areas.

29.18.020 Regulations

The type of regulation applicable to the land depends upon the classification in which the land is placed, as provided in section 29.18.040. If those regulations conflict with other regulations of Brigham City's Municipal Code, the more stringent of the two regulations shall govern.

29.18.030 Sensitive Areas Overlay Map

A map showing the sensitive areas overlay which specifies critical areas within Brigham City which, when proposed for development, must go through the process outlined in this Chapter. Properties within this overlay may not be suitable for development or may only be suitable after mitigation of the hazards associated with the specific site.

29.18.040 All developments(s) to be Considered a Conditional Use in Sensitive Areas

Because of the environmental conditions existing within sensitive areas, all developments proposed within an area determined to be a sensitive area shall be considered a conditional use and shall be reviewed and considered consistent with the procedures for the review of a conditional use as provided in Chapter 29.06 of this Title.

29.18.050 Land Classifications

The following factors shall be used to determine the classifications of various lands and their constraints to building and development on them:

A. **Floodplain Corridor Lands:** Lands with potential stream flow and flood hazard. The following lands are classified as Floodplain Corridor lands:

1. All land contained within the 100-year floodplain as defined by the Federal Emergency Management Agency, in maps adopted by Brigham City Municipal Code.
2. All land within the area defined as Floodplain Corridor land in maps adopted by the Brigham City Council as provided for in 29.18.060(A)(2).
3. All lands which have physical or historical evidence of flooding in the historical past.

¹ Entire Title rewritten with Ordinance No. 07-17 dated 8/30/07.

4. All areas within twenty feet (horizontal distance) of any creek designated for Riparian Preservation in 29.18.050(B) and depicted as such on maps adopted by the Council as provided for in 29.18.060(A)(2).

B. Riparian Preservation and Wetland Areas: The lands shown on the official maps as Riparian Areas, These areas are identified as 75 feet from the stream centerline for streams draining a basin of greater than 1 square mile, and 25 feet from a streams that drain areas of one square mile or less. It also includes any areas identified as wetlands or riparian in a Federal Section 404 Permit Process.

C. Erosive and Slope Failure Lands: Lands with potential erosion hazards. Erosive Lands and Slope Failure Lands are lands that are subject to damage from erosion and slope failure, or defined as erosion and slope failure lands on the Sensitive Area Overlay map (29.18.030) and have a slope of twenty five (25) percent or greater.

D. Earthquake Fault and Hazard Lands: Lands with identified earthquake faults and areas prone associated earthquake hazards such as debris flows, landslides, liquefaction, and rock falls, as defined on the Sensitive Area Overlay map (29.18.030).

E. Wildfire Hazard Lands: Lands with potential of wildfire, as defined on the Sensitive Area Overlay map (29.18.030).

F. Severe Constraint Lands: Lands with severe development limitations which generally limit normal development. The following lands are classified as Severe Constraint Lands:

1. All areas which are within the floodway channels.
2. All lands with a slope greater the twenty five (25) percent

G. Classifications Cumulative: The above classifications are cumulative in their effect and, if a parcel of land falls under two or more classifications, it shall be subject to the regulations of each classification. Those restrictions applied shall pertain only to those portions of the land being developed and not necessarily to the whole parcel.

29.18.060 Review of Proposed Development in Sensitive Areas

The Supervisor/City Planner, prior to scheduling any application for a development proposed to be located wholly or partially, within any sensitive area as identified by this Chapter, shall receive comments and recommendations from City Department and other reviewing agencies, as applicable.

29.18.070 Development Standards for Floodplain Corridor Lands

The floodplain corridor lands and flood hazard areas of Brigham City are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately flood-proofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

A. The following are the general provisions of this section

1. This chapter shall apply to all areas of special flood hazards within the jurisdiction of Brigham City, Utah.
2. The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for the Brigham City Area", dated February 17, 1981, with an accompanying Flood Insurance Rate Map (FIRM) is hereby adopted by reference and declared to be a part of this chapter. The Flood Insurance Study and FIRM are on file at the Brigham City's Community Development Department Offices.
3. No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this chapter and other applicable regulations.
4. This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. This chapter, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
5. The interpretation and application of this chapter all provisions shall be:
 - a. Considered as minimum requirements;
 - b. Liberally construed in favor of the governing body; and
 - c. Deemed neither to limit nor repeal any other powers granted under state statutes.
6. The degree of flood protection required by this chapter is considered reasonable for

regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of Brigham City, any officer or employee thereof, or the Federal Emergency Management Agency for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

B. Administration - The following standards shall apply:

1. Standards for fill in Floodplain Corridor lands:

- a. Fill shall be designed as required by the Brigham City Building Code, where applicable.
 - b. The toe of the fill shall be kept at least ten feet outside of floodway channels, as defined in this chapter.
 - c. The amount of fill in the Floodplain Corridor shall be kept to a minimum. Fill and other material imported from off the lot that could displace floodwater shall be limited to the following:
 - i. Poured concrete and other materials necessary to build permitted structures on the lot.
 - ii. Aggregate base and paving materials.
 - iii. Plants and other landscaping material.
 - iv. A total of fifty cubic yards of other imported fill material, or three hundred cubic yards per acre, whichever is greater. These amounts are the maximum cumulative fill that can be imported onto the site, regardless of the number of permits issued.
 - v. The above limits on fill shall be measured from <date of adoption>, and shall not exceed the above amounts.
 - d. If additional fill is necessary beyond the permitted amounts in (3) above, then fill materials must be obtained on the lot from cutting or excavation only to the extent necessary to create an elevated site for permitted development. All additional fill material shall be obtained from the portion of the lot in the Floodplain Corridor.
 - e. Adequate drainage shall be provided for the stability of the fill.
 - f. Fill to raise elevations for a building site shall be located as close to the outside edge of the Floodplain Corridor as feasible.
2. Culverting or bridging of any waterway or creek identified on the official maps adopted pursuant to 29.18.030 must be designed by an engineer and approved by the Public Works Department. Stream crossings shall be designed to pass a 100-year flood without any increase in the upstream flood height elevation. The engineer shall consider in the design the probability that the culvert will be blocked by debris in a severe flood, and accommodate expected overflow. Fill for culverting and bridging shall be kept to the minimum necessary, but is exempt from the limitations in section 29.18.070(1) above. Culverting or bridging of streams identified as Riparian reservation is subject to the requirements of 29.18.070.
3. Non-residential structures shall be flood-proofed to the elevation contained in the official maps adopted by 29.18.030, whichever height is greater. Where no specific elevations exist, buildings shall be elevated to three feet above the stream channel on all drainage ways identified on the official maps.
4. No new residential structures are permitted in the Floodplain Corridor, except as permitted in sections (5) and (6) below. All residential structures shall be elevated so that the lowest habitable floor shall be raised to one foot above the elevation contained in the official maps adopted by 29.18.030, whichever height is greater. Where no specific elevations exist, buildings shall be elevated to three feet above the stream channel on all drainage ways identified on the official maps.
5. The elevation of the finished lowest habitable floor shall be certified to Brigham City by an engineer or surveyor prior to issuance of a certificate of occupancy for the structure.
6. All lots modified by lot line adjustments, or new lots created from lots which contain Floodplain Corridor land must contain a building envelope on all lot(s) which contain(s) buildable area of a sufficient size to accommodate the uses permitted in the underling zone, unless the action is for open space or conservation purposes. This section shall apply even if the effect is to prohibit further division of lots that are larger than the minimum size permitted in the zoning ordinance.
7. Basements.

- a. Habitable basements are not permitted for new residential structures or additions located within the Floodplain Corridor.
 - b. Non-habitable basements, used for storage, parking, and similar uses are permitted for residential structures but must be flood-proofed.
 - c. Development of habitable basements of existing non-residential structures that are at or below the flood elevations contained in the official maps shall be permitted.
 - d. Habitable basements shall not be used for sleeping quarters.
8. Storage of petroleum products, pesticides, or other hazardous or toxic chemicals is not permitted in Floodplain Corridor lands.
9. Fences constructed within twenty feet of any Riparian Preservation Creek designated by this ordinance shall be limited to wire or electric fence, or similar fence that would not collect debris or obstruct flood waters, but not including wire mesh or chain link fencing.
10. Decks and structures other than buildings, if constructed on Floodplain Corridor Lands and at or below the levels specified in Paragraphs (3) and (4) of the section.
11. Local streets and utility connections to developments in and adjacent to the Floodplain Corridor shall be located outside of the Floodplain Corridor, except for crossing the Corridor in the shortest possible distance.

29.18.080 Development Standards for Riparian Preservation lands

All development in areas identified for Riparian Preservation, as defined in 29.18.050, shall comply with the following standards:

- A. Development shall be subject to all Development Standards for Floodplain Corridor Lands (29.18.060)
- B. Within these areas in addition to the standards for Undeveloped Floodplains, no land disturbing activity is allowed except as permitted in this section.
- C. Permitted Uses
 - 1. Up to ten percent of the area may be disturbed for private yard structures including but not limited to: storage sheds, gardens, yards, trails, and clearings, except no disturbance is permitted for Section 404 identified areas.
 - 2. Repair, replacement or improvement of utility facilities where:
 - a. the disturbed portion of the Riparian Preservation lands is restored; and
 - b. non-native vegetation is removed from the Riparian Preservation lands and replaced with natural vegetation.
 - 3. Additions, alterations, rehabilitation, or replacement of existing structures that do not increase existing structural footprint in the Riparian Preserve lands where the disturbed portion of the area is restored using native vegetative cover.
 - 4. Stream, wetland, riparian and upland enhancement or restoration projects;
 - 5. Farming practices and farm uses, excluding buildings and structures, and the pasturing of livestock within 25 feet of the stream.
 - 6. Routine repair and maintenance of existing structures, roadways, driveways, utility facilities, accessory uses and other development.
 - 7. Measures to remove or abate nuisances, or any other violation of State statute, administrative agency rule or Brigham City ordinance.

29.18.090 Development Standards for Erosive and Slope Failure Lands

A. All development that removes vegetation or disturbs topsoil and leaves the disturbed soil at a slope of fifty percent or more shall comply with the following standards:

- 1. Any exposed soil shall be revegetated in a manner to reestablish a vegetative community within a one-year period from issuance of a Certificate of Occupancy. If irrigation is not provided, then the exposed soil must be planted with species that can survive without irrigation.
 - 2. Vegetative cover, rock, dry or conventional masonry, or other permanent cover must be maintained on areas that have been disturbed.
 - 3. These restrictions shall not apply to areas of exposed bedrock which exhibit no erosion potential.
- B. Cuts and Fills.

1. In addition, any cuts and/or fills greater than two hundred fifty cubic yards must be designed by an engineer to comply with City Building Code. Such cuts and/or fills shall be designed in such a manner that they will be stable for the use intended.

2. If the excavation is not a dedicated street or a public right-of-way, the engineer shall declare to Brigham City, after the cut and/or fill is completed, that it was constructed to plans and meets all standards set forth in the plans approved.

3. Nothing in this section shall abridge Brigham City's right to inspect work in progress or in its completed state, to make appropriate measurements and tests to determine if the cut and fill was made according to plan, and to require alterations prior to final approval of the cut and/or fill.

C. Any development that is proposed in Erosive and Slope Failure Lands must be shown on a master site plan at the time the final plan or plat is filed. All development must comply with the master site plan. Any improvements necessary for the implementation of the master plan (e.g., storm drains, gutters, etc.), which involve two or more parcels of land must be constructed by the applicant prior to any development occurring on the parcels.

D. All structures in Erosive and Slope Failure Lands shall have foundations that have been designed by an engineer or architect.

E. All newly created lots or lots modified by a lot line adjustment must include a building envelope on all lots that contains a buildable area of sufficient size to accommodate the uses permitted in the underlying zone without including erosive and slope failure land, unless the division or lot line adjustment is for open space or conservation purposes.

29.18.100 Development Standards for Earthquake Fault and Hazard Lands

For those areas identified as an active or potential mapped earthquake fault and landslide areas, development may be permitted by the City upon the review and approval of an engineering geotechnical report (see section 29.17.120 of this Chapter) identifying the following:

A. Accurately identifying the location of earthquake faults and landslide areas.

B. The location and description of proposed changes to the site, including any grading and excavation, vegetation removal, the location and profiles of proposed roadways, the location of proposed utility lines, the location of existing and proposed buildings and structures, and the location of all other proposed site features.

C. The identification of measures and actions proposed to mitigate the risks from earthquake, landslides, and soil disturbance including a schedule of the sequence for the installation of planned mitigation actions, including anticipated starting and completion dates.

D. No critical facility (excluding transportation lines or utilities which by their nature may cross active faults or structures designed for human occupancy shall be built astride an active fault. No structure designed for human occupancy shall be built on a fault scarp. Footing setbacks from a fault scarp shall meet the requirements of the International Uniform Building Code. The Planning Commission may increase footing setback requirements where information from a geotechnical report indicates a slope condition warrant a greater setback distance.

29.18.110 Development Standards for Wildfire Hazards Lands

A. Requirements for Subdivisions, or Planned Developments,

1. A Fire Prevention and Control Plan shall be required with the submission of any application for plan approval of a Planned Unit Development or preliminary plat of a subdivision, which contains areas designated Wildfire Hazard areas.

2. The Supervisor/City Planner shall forward the Fire Prevention and Control Plan to the Director of Emergency Services within three days of the receipt of a completed application. The Director of Emergency Services shall review the Fire Prevention and Control Plan, and submit a written report to the Supervisor/City Planner no less than seven days before the scheduled hearing. The Director of Emergency Services report shall be a part of the record of the Planning Action.

3. The Fire Prevention and Control Plan shall include the following items:

a. An analysis of the wildfire hazards on the site, as influenced by existing vegetation and topography.

b. A map showing the areas that are to be cleared of dead, dying, or severely diseased vegetation.

c. A map of the areas that are to be thinned to reduce the interlocking canopy of trees.

d. A tree management plan showing the location of all trees that are to be preserved and

removed on each lot. In the case of heavily forested parcels, only trees scheduled for removal shall be shown.

e. The areas of primary and secondary fuel breaks that are required to be installed around each structure, as required by this section.

f. Roads and driveways sufficient for emergency vehicle access and fire suppression activities, including the slope of all roads and driveways within the Wildfire Lands area.

4. Criterion for Approval. The hearing authority shall approve the Fire Prevention and Control Plan when, in addition to the findings required by this chapter, the additional finding is made that the wildfire hazards present on the property have been reduced to a reasonable degree, balanced with the need to preserve and/or plant a sufficient number of trees and plants for erosion prevention, wildlife habitat, and aesthetics.

5. The hearing authority may require, through the imposition of conditions attached to the approval, the following requirements as deemed appropriate for the development of the property:

a. Delineation of areas of heavy vegetation to be thinned and a formal plan for such thinning.

b. Clearing of sufficient vegetation to reduce fuel load.

c. Removal of all dead and dying trees.

d. Relocation of structures and roads to reduce the risks of wildfire and improve the chances of successful fire suppression.

6. The Fire Prevention and Control Plan shall be implemented during the public improvements required of a subdivision or Performance Standards Development, and shall be considered part of the subdivider's obligations for land development. The Plan shall be implemented prior to the issuance of any building permit for structures to be located on lots created by partitions and for subdivisions or Performance Standards developments not requiring public improvements. The Director of Emergency Services, or designee, shall inspect and approve the implementation of the Fire Prevention and Control Plan, and the Plan shall not be considered fully implemented until the Director of Emergency Services has given written notice to the Supervisor/City Planner that the Plan was completed as approved by the hearing authority.

7. In subdivisions or planned unit developments, provisions for the maintenance of the Fire Prevention and Control Plan shall be included in the covenants, conditions and restrictions for the development, and the Brigham City shall be named as a beneficiary of such covenants, conditions and restrictions.

B. Requirements for construction of all structures.

1. All new construction and any construction expanding the size of an existing structure, shall have a "fuel break" as defined below.

2. A "fuel break" is defined as an area which is free of dead or dying vegetation, and has native, fast-burning species sufficiently thinned so that there is no interlocking canopy of this type of vegetation. Where necessary for erosion control or aesthetic purposes, the fuel break may be planted in slow-burning species. Fuel breaks do not involve stripping the ground of all native vegetation.

3. Primary Fuel Break - A primary fuel break will be installed, maintained and shall extend a minimum of 30 feet in all directions around structures, excluding fences, on the property. The goal within this area is to remove ground cover that will produce flame lengths in excess of one foot. Such a fuel break shall be increased by five feet for each ten percent increase in slope over ten percent

4. Secondary Fuel Break - A secondary fuel break will be installed, maintained and shall extend a minimum of 100 feet beyond the primary fuel break where surrounding landscape is owned and under the control of the property owner during construction. The goal of the secondary fuel break is to reduce fuels so that the overall intensity of any wildfire is reduced through fuels control.

5. All structures shall be constructed or re-roofed with Class B or better non-wood roofing materials, as determined by the Building Ordinance. All re-roofing of existing structures in the Wildfire Lands area shall be done under approval of a zoning permit. No structure shall be constructed or re-roofed with wooden shingles, shakes, wood-product material or other combustible roofing material, as defined in the Brigham City Building Code.

C. Fuel breaks in areas which are also Erosive or Slope Failure Lands shall be included in the erosion control measures outlined in Section 29.17.090.

29.18.120 Development Standards for Severe Constraint Lands

A. Severe Constraint Lands are extremely sensitive to development, grading, filling, or

vegetation removal and, whenever possible, alternative development should be considered.

B. Development of floodways is not permitted except for bridges and road crossings. Such crossings shall be designed to pass the one hundred year flood without raising the upstream flood height more than six inches.

C. New structures are not allowed on Severe Constraints Lands.

D. Other development of land or approval for a planning action shall be allowed only when the following study has been accomplished. An engineering geologic study approved by the Brigham City Engineer, Public Works Director and Supervisor of the Community Development Department/City Planner establishes that the site is stable for the proposed use and development. The study shall include the following:

1. Index map.
2. Project description to include location, topography, drainage, vegetation, and discussion of previous work and discussion of field exploration methods.
3. Site geology, based on a surficial survey, to include site geologic maps, description of bedrock and surficial materials, including artificial fill, locations of any faults, folds, etc., and structural data including bedding, jointing and shear zones, soil depth and soil structure.
4. Discussion of any off-site geologic conditions that may pose a potential hazard to the site, or that may be affected by on-site development.
5. Suitability of site for proposed development from a geologic standpoint.
6. Specific recommendations for cut slope stability, seepage and drainage control or other design criteria to mitigate geologic hazards.
7. If deemed necessary by the engineer or geologist to establish whether an area to be affected by the proposed development is stable, additional studies and supportive data shall include cross-sections showing subsurface structure, graphic logs with subsurface exploration, results of laboratory test and references.
8. Signature and registration number of the engineer and/or geologist.
9. Additional information or analyses as necessary to evaluate the site.

29.18.130 Engineering Geotechnical Report

A. The Engineering Geotechnical Report shall be prepared by a licensed geotechnical engineer and licensed geologist. The report shall be signed and dated by the preparer and shall also include the qualifications of the preparer.

B. The report shall be site-specific and identify all known or suspected potential geotechnical or natural hazards, originating on-site or off-site, affecting the particular property.

C. The report shall include a detailed site map (scale: one (1) inch equals two hundred (200) feet or larger) showing the location of the hazard(s) with delineation of the recommended setback distances from such hazards(s) and the recommended location for proposed structures.

D. The report shall address the potential effects of the hazard(s) on the proposed development and occupants, thereof, in terms of risk and potential damage.

E. The report shall contain recommendations for avoidance or mitigation of the effects of the hazard(s). The evidence on which the recommendations and conclusions are based shall be clearly stated in the report. Trench logs (scale: one (1) inch equals five (5) feet, or larger), aerial photographs, references with citations, and other supporting information as applicable, shall also be included in the report.

F. All Engineering Geotechnical Report submitted to the City shall be reviewed by the Utah Geological Survey for completeness, accuracy, and appropriate recommendations.

29.18.140 Disclosure of a Natural Hazard by a Engineering Geotechnical Report

Whenever a potential natural hazard is identified by a required geotechnical report under this Chapter, the owner of such parcel shall record a restrictive covenant running with the land in a form satisfactory to the City prior to the approval of any development or subdivision of such parcel which shall include the following:

A. Notice of the existence and availability of the engineering geotechnical report that identifies the natural hazards for public inspection in the Brigham City Community Development Office; and

B. An agreement by the owner of the parcel and any successor in interest to comply with any conditions set by the City Planning Commission to minimize potential adverse effects of the natural hazard(s).